

STARHS: HIV Incidence Surveillance Summary For Providers

What is STARHS?

The HIV, STD and Bloodborne Infections Surveillance Section in the Bureau of Epidemiology, Michigan Department of Community Health (MDCH) is working with the Centers for Disease Control and Prevention to implement a surveillance activity to estimate HIV incidence (rate of new infections). The *serologic testing algorithm for recent HIV seroconversion* (STARHS), uses a test called the IgG Capture BED Enzyme Immunoassay (BED EIA) to determine if infection was likely to have occurred in the last six months. STARHS estimates recent infection accurately in groups of people, not individuals.

Why is incidence testing important?

HIV incidence data has important public health implications for evaluating HIV intervention and prevention programs for effectiveness, for targeting prevention efforts associated with ongoing transmission, and for allocating resources to populations in greatest need of prevention efforts.

How does the BED EIA work?

HIV antibodies develop soon after infection and continue to increase in concentration over time during early infection. Standard serum HIV testing includes an antibody screen (enzyme immunoassay: HIV EIA) with confirmation by an HIV-1 Western blot test. The BED-EIA is a second type of enzyme immunoassay used on the same serum sample after it has been confirmed as HIV positive to determine if HIV infection is recent (within the last six months). The BED EIA measures the proportion of HIV-specific IgG antibodies to overall IgG antibodies in the sample. If the specimen is from an individual whose infection is long-term, high levels of HIV-specific antibody will be in the sample resulting in a strong color reaction on the test. If the specimen is from a person infected in the previous half year, there will be less HIV-specific IgG antibody in the sample resulting in a less strong color reaction in the test.

Is consent required for incidence testing?

Since the procedure is a non-research surveillance activity, no further consent for testing is required from the client beyond the initial HIV test consent form. This test is performed only on HIV positive sera and is therefore not a diagnostic test.

Which specimens will receive the incidence test?

Individuals' specimens will be tested by the BED EIA if they are 13 years of age or older, living in the surveillance area, tested confidentially (i.e., named, not anonymous) and not previously reported to the Michigan HIV/AIDS Reporting System (eHARS). Generally, the test is run on first-time positive testers, but may be run on a tester that was just recently diagnosed and reported to eHARS in the preceding 3 months.

What is the ideal specimen for incidence testing?

The ideal specimen for incidence testing is leftover serum from a diagnostic HIV positive serum specimen. No additional blood needs to be drawn.

If remnant serum is not available (e.g., the diagnostic test used an oral screen with an oral confirmation), remnant serum or plasma from other tests used in the care (e.g., CD4, viral load) of HIV-positive persons may be acceptable for use in incidence testing provided the specimen was drawn within three months of the diagnostic blood draw.

How will the STARHS incidence test affect my client?

After your client has received his/her first confirmatory positive HIV test result from a confidential test, he/she will be asked to complete a short questionnaire with questions about his/her HIV testing history and medicines that he/she took that affect HIV. This information is needed to help make population based estimates of incidence. Since the accuracy of the BED assay for determining recent infections on an individual basis is not known, the results will not be returned to the client or physician. This assay can only be used for surveillance purposes and cannot be used for clinical or diagnostic purposes.

How can I assure my client that confidentiality will be maintained?

All information collected is part of routine surveillance activities and is subject to rigorous confidentiality rules. Policies and procedures are already in place to protect the confidentiality of persons reported to the Surveillance Program as being HIV positive.

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